|  | Index of Claims |          |  |             |           |          |          |          |                              |         |       |          |          | Application No. |              |            |             |          |          |         |             |              | Applicant(s) |                     |          |         |            |          |                 |         |   |
|--|-----------------|----------|--|-------------|-----------|----------|----------|----------|------------------------------|---------|-------|----------|----------|-----------------|--------------|------------|-------------|----------|----------|---------|-------------|--------------|--------------|---------------------|----------|---------|------------|----------|-----------------|---------|---|
|  |                 |          |  |             |           |          |          |          |                              |         |       |          |          | 10/644,115      |              |            |             |          |          |         |             |              |              | LAUTZENHISER ET AL. |          |         |            |          |                 |         |   |
|  |                 |          |  |             |           |          |          |          |                              |         |       |          |          |                 | Examiner     |            |             |          |          |         |             |              |              | Art Unit            |          |         |            |          |                 | TAL.    |   |
|  |                 |          |  |             |           |          |          |          |                              |         |       |          |          |                 |              |            |             |          |          |         |             |              |              |                     |          |         |            |          |                 |         |   |
|  |                 |          |  |             |           |          |          |          |                              |         |       |          |          |                 | Henry K Choe |            |             |          |          |         |             |              |              |                     | 17       |         |            |          | <u> </u>        |         |   |
|  |                 |          |  |             |           |          |          |          |                              |         |       |          |          |                 |              | 1          | _           |          |          |         |             | 1            |              |                     |          |         |            | $\neg$   |                 |         |   |
|  |                 | √        | Rejected                                     |             |           |          | -        | .        | (Through numera<br>Cancelled |         |       |          | eral     | al)             |              | N          | Non-Elect   |          |          | ted     | ed          | A            | Appeal       |                     |          |         |            |          |                 |         |   |
|  |                 |          |  |             | 4         |          | $\vdash$ | -        | Cancened                     |         |       |          |          |                 | -            |            |             |          |          | ł       |             |              |              |                     |          | _       |            |          |                 |         |   |
|  |                 | Α        | Allowed                                      |             |           |          | ÷        |          | Restricted                   |         |       |          |          |                 | 1            | Interferen |             |          | nce      | се      | 0           | Objected     |              |                     |          |         |            |          |                 |         |   |
|  | L.              |          |  |             |           |          |          |          |                              |         |       |          |          |                 |              |            | l           |          |          |         |             |              | )            |                     |          |         |            |          |                 |         |   |
|  | Claim           |          |  | Date        |           |          |          |          |                              |         | Claim |          |          |                 |              | [          | <del></del> |          |          | 7       | CI          | aim          | Γ            | Date                |          |         |            |          | ]               |         |   |
|  |                 | a        | 8  | $\sqrt{-1}$ |           |          | T        |          |                              | 1       |       |          |          |                 |              |            |             |          |          |         |             |              | ā            |                     |          |         |            |          |                 |         | ] |
|  | Final           | Original | 18/20  |             |           |          |          | ı        |                              |         |       | Final    | Original |                 |              |            |             |          |          |         |             | Final        | Original     |                     |          |         |            |          |                 |         |   |
|  | "               | ŏ        |  |             |           |          |          |          |                              |         | -     | "        | ŏ        |                 |              |            |             |          | Ì        |         |             | "            | Ō            |                     |          |         |            |          |                 |         | ] |
|  |                 | 1        |  |             | $\Box$    |          | $\Box$   |          |                              | $\top$  |       |          | 51       |                 |              |            |             |          |          | $\perp$ |             |              | 101          |                     |          | 1       | lacksquare |          |                 | 4       |   |
|  | 2               | 3        | <u> </u>                                     | $\dashv$    | $\dashv$  | $\dashv$ | +        | -        | +                            | +       |       |          | 52<br>53 | +               | +            | -          | Н           |          | +        | +       | -           |              | 102          | Н                   | +        | +       | ╁╴         | _        | -               | ╁       | 1 |
|  |                 | 4        |  |             | 十         | $\dashv$ | 十        | $\dashv$ | ╅                            | +-      |       |          | 54       |                 | ╁            | +-         |             |          | Ŧ        | +       | -           |              | 104          | H                   | +        | +       | †=         |          |                 | 士       | j |
|  | 345             | 5        | =  |             | $\Box$    |          | Д.       | $\Box$   |                              |         | 1     |          | 55       |                 | $\bot$       |            |             |          |          | 4       | ]           |              | 105          |                     | _        | _       |            | L        |                 | 4-      | ] |
|  | 14              | 6<br>7   | ()   | -           | +         | -        | +        | -        |                              | ╁       |       |          | 56<br>57 | _               |              | -          | Н           | $\dashv$ | -        | +       | - E         |              | 106<br>107   | Н                   | $\dashv$ | ╁       | ╁          | -        | $\vdash$        | +       | 1 |
|  | 6               | 8        |  | $\neg$      | $\dashv$  | $\dashv$ | $\pm$    | $\dashv$ | +-                           | +       |       |          | 58       |                 | +            |            |             |          |          |         | 1           |              | 108          | $\Box$              |          |         |            | <u> </u> |                 |         | ] |
|  |                 | 9        |  |             |           |          |          |          | 1                            |         | ]     |          | 59       |                 | 4            |            |             | $\Box$   | $\perp$  |         | 7           |              | 109          | Ш                   |          | -       | -          | L        |                 |         | _ |
|  | 7               | 10<br>11 |  | -           | -         | -        | +        |          |                              | -       |       | <u> </u> | 60<br>61 | +               | +-           | ╁          |             | $\dashv$ | +        | +       | -           |              | 110          | H                   |          | +       | -          | ├        | $\vdash \vdash$ | +-      | 1 |
|  | 8               | 12       |  | _           |           |          |          |          |                              | 1       | 1     |          | 62       |                 |              |            |             |          |          | İ       | <b>-</b>    |              | 112          |                     |          |         |            |          |                 |         | ] |
|  |                 | 13       | 1  |             |           |          | $\Box$   | $\Box$   | Τ.                           | $\Box$  | ]     |          | 63       |                 | 4            | 1          |             |          |          | _       | ]           |              | 113          |                     | _ _      | 4       | <u> </u>   |          |                 | -       | _ |
|  | 10              | 14<br>15 | =  | $\dashv$    | $\dashv$  | _        | ᆉ        | - -      | _                            | ╁       | Ŀ     |          | 64<br>65 | $\vdash$        | +            | +          | Н           | $\dashv$ | -+       | +       | <b>-</b>  - |              | 114<br>115   | H                   | +        | +       | ╁          | -        | $\vdash$        | ╅       | - |
|  | 12              | 16       | =  |             |           |          |          |          |                              |         |       |          | 66       |                 |              |            |             |          |          |         | ٦.,         |              | 116          |                     |          | 上       |            |          |                 |         | ] |
|  | /3              | 17       | , IN   |             |           |          | $\Box$   |          | 4                            | 4_      |       |          | 67       |                 |              | -          |             | $\sqcup$ | _        | 4       | 4.          |              | 117<br>118   |                     | -        | +       | -          | ┡        | -               | +-      | 4 |
|  | 14              | 18<br>19 | =  |             | -         | $\dashv$ | $\dashv$ | +        | ╬                            | +-      | 1     |          | 68<br>69 |                 | ╁            | +          |             | $\dashv$ | $\dashv$ | +       | +           |              | 119          | +                   | $\dashv$ | +-      | ╁╴         | ╁╴       | $\vdash$        | ╁       | 1 |
|  |                 | 20       | <u>.                                    </u> |             |           |          | I        |          |                              |         | ]     |          | 70       |                 | 工            |            |             |          | 丁        |         | 1           |              | 120          |                     |          |         |            |          |                 |         | ] |
|  | 15              | 21       | 11 11  |             | 4         |          | 4        | 4        | -                            | +       | -     |          | 71<br>72 | 4               | +            | _          | _           | Н        | $\dashv$ | +       | 4           | <u> </u>     | 121<br>122   | Н                   | 4        |         | ╂          | ┞        | -               |         | 4 |
|  | 16              | 22       | _  | -           | $\dashv$  | -        | $\dashv$ | +        | +                            | +       | ┨     |          | 73       | +               | +            | +-         | -           | H        | $\dashv$ | +       | $\dashv$    |              | 123          | $\vdash$            | $\dashv$ | +-      | ╁          | ┢        |                 | +       | † |
|  |                 | 24       |  |             |           |          |          |          |                              |         | 1     |          | 74       |                 | 士            |            |             |          |          |         |             |              | 124          |                     |          |         | <u> </u>   |          |                 |         | ] |
|  |                 | 25       |  |             | 4         | -        | 4        | +        | +                            | +       | -     | <u> </u> | 75<br>76 |                 | +            | -          |             | $\vdash$ | +        | +       | 4           |              | 125<br>126   | Н                   | +        | +       | +-         | -        | -               | +       | - |
|  |                 | 26<br>27 | _  |             | $\dashv$  | $\dashv$ | $\dashv$ | $\dashv$ | +                            | +-      | 1     |          | 77       | +               | ╁            | +          |             | H        | $\dashv$ | +       | $\dashv$    |              | 127          |                     | +        | +       | +          | ┢        | $\vdash$        | +       |   |
|  |                 | 28       |  |             |           |          |          |          |                              |         | 1     |          | 78       |                 |              |            |             | $\Box$   |          |         | <u></u>     |              | 128          |                     |          |         |            |          | П               | Ţ       | ] |
|  |                 | 29<br>30 | _  | -           | 4         | $\dashv$ | $\dashv$ | +        |                              | +-      | 1     |          | 79<br>80 | -               | +            | +          | $\vdash$    | $\vdash$ | $\dashv$ | +       | -           | $\vdash$     | 129<br>130   | -                   |          |         | ╁          | ┝        | ╁┼              | +-      | - |
|  |                 | 31       | -  |             | +         | $\dashv$ | $\dashv$ | +        | +-                           | +       | 1     |          | 81       | $\vdash$        | +            | +          | -           | H        | $\dashv$ | +       | ۱           | $\vdash$     | 131          | П                   | $\top$   |         | T          | $\vdash$ | $\vdash$        | $\top$  | 1 |
|  |                 | 32       |  |             |           |          |          |          | 1                            | 1       | ] :   |          | 82       |                 | 1            |            |             |          | 4        |         |             |              | 132          |                     |          |         |            |          | П               | 1       |   |
|  |                 | 33<br>34 | _  | $\dashv$    | $\dashv$  | $\dashv$ | $\dashv$ | -        | +                            | +-      | 1     |          | 83<br>84 | _               | +            | +          | L           |          | +        | +       |             | _            | 133<br>134   | $\vdash$            | +        |         | ╁          | -        | $\vdash$        | +-      | - |
|  | -               | 35       |  |             | 7         | $\dashv$ | 十        | +        | +                            | +       | 1     |          | 85       | $\dashv$        | 十            | +-         |             |          | $\dashv$ | +       | 00          |              | 135          |                     | $\top$   | $\top$  |            |          |                 |         | 1 |
|  |                 | 36       |  |             |           |          | $\Box$   |          |                              |         |       |          | 86       |                 |              |            |             |          | 4        | $\perp$ | 7           |              | 136          | П                   | $\dashv$ | $\perp$ | $\perp$    |          |                 | 1       |   |
|  |                 | 37<br>38 | $\vdash$                                     | $\dashv$    | $\dashv$  | $\dashv$ | -+       | +        |                              | +       | -     |          | 87<br>88 | $\vdash$        | ╁            | +-         | _           |          | +        | +       | -           |              | 137<br>138   | Н                   | +        | ┿       | ╁          | ├        | ┼-┼             | +-      | 1 |
|  |                 | 39       | Н  |             | $\exists$ |          | _†       | _        | $\pm$                        | $\perp$ | 1     |          | 89       |                 | 士            | 士          |             |          | _        | $\perp$ |             |              | 139          |                     |          | 士       |            |          |                 | 土       | 1 |
|  |                 | 40       | $\Box$                                       |             | $\Box$    | 口        | 4        | $\bot$   | $\bot$                       | T       | 1     |          | 90       |                 | Ţ            |            |             | П        | $\bot$   | 7       | ]           |              | 140          |                     | $\bot$   |         | $\vdash$   |          | H               |         | _ |
|  | -               | 41       | $\vdash$                                     | $\dashv$    | -         |          | +        | +        | +                            | +       | -     | $\vdash$ | 91<br>92 | $\vdash$        | +            | +          | H           | $\vdash$ | +        | +       | $\dashv$    | <del> </del> | 141<br>142   | $\vdash$            | +        | +       | +          | $\vdash$ | ++              | +-      | - |
|  |                 | 43       |  |             | _         |          |          | 士        | $\pm$                        | İ       | ]     |          | 93       |                 | $\pm$        |            |             |          | 士        | 士       | F .         |              | 143          |                     |          |         | T          |          |                 |         | 1 |
|  |                 | 44       | $\Box$                                       | П           | $\exists$ | $\Box$   | $\bot$   | Ţ        | $\bot$                       | F       | -     |          | 94       | $\vdash \vdash$ | #            | +          | L           |          | $\perp$  | -[-     | -           |              | 144          | $\vdash$            | $\perp$  | +       | $\perp$    | -        | +               | +       | _ |
|  | -               | 45<br>46 | -  | $\vdash$    | $\dashv$  | $\dashv$ | $\dashv$ | +        | +                            | +       | d     | -        | 95<br>96 | $\vdash \vdash$ | +            | +          | $\vdash$    | H        | +        | +       | -           |              | 145<br>146   | +                   |          | +       | +          | -        | +               | +       | 1 |
|  |                 | 47       |  |             |           |          |          | 士        |                              |         | 1     |          | 97       |                 | 土            |            |             |          |          |         |             |              | 147          |                     | $\Box$   |         |            |          | П               | $\perp$ | 1 |
|  | 1               | 40       | •  |             | - 1       | - 1      | - 1      | 1        | - 1                          |         | 1     | 1        | OR       |                 | - 1          | i          | 1 '         | ı I      | - 1      | - 1     | - 1         | 1            | 1/18         | 1 1                 | - 1      | - 1     | 1          | 1        | 1 I             | 1       | 1 |